



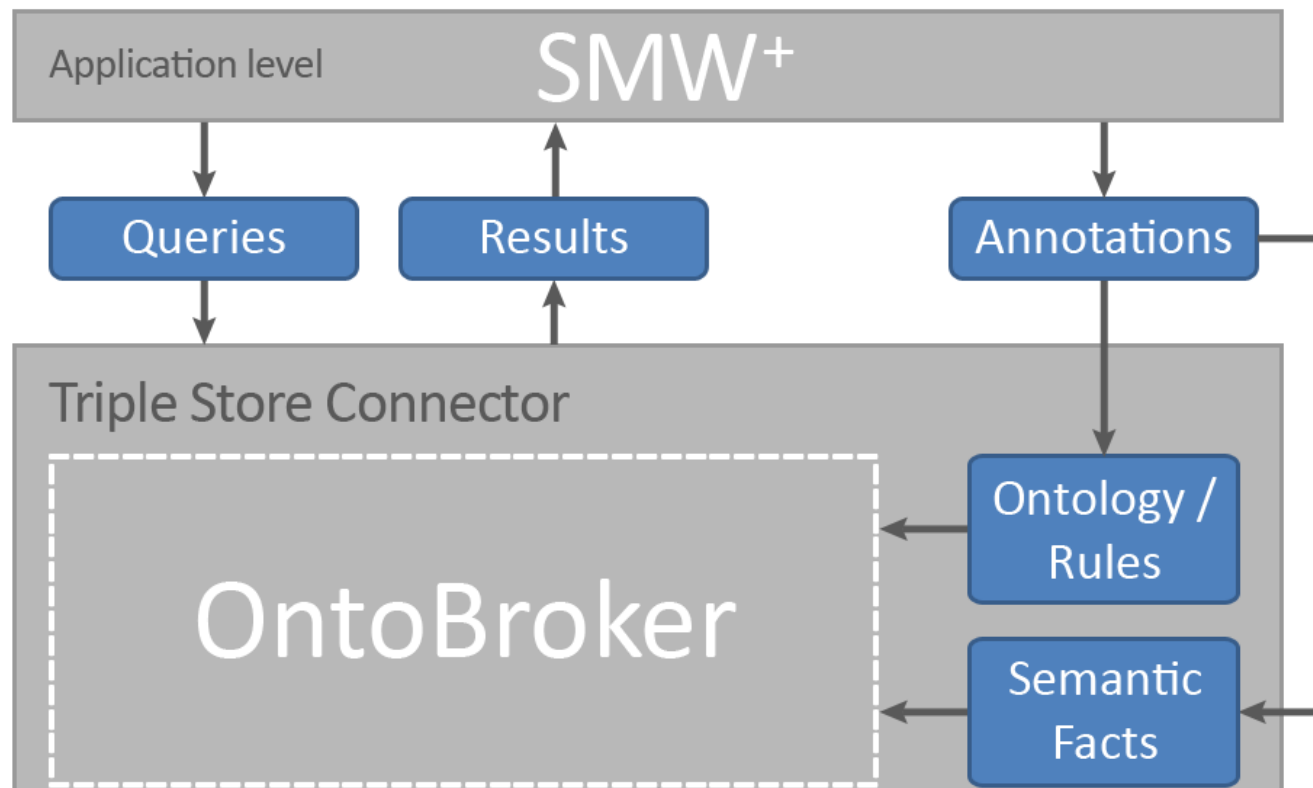
Data Integration with SMW+

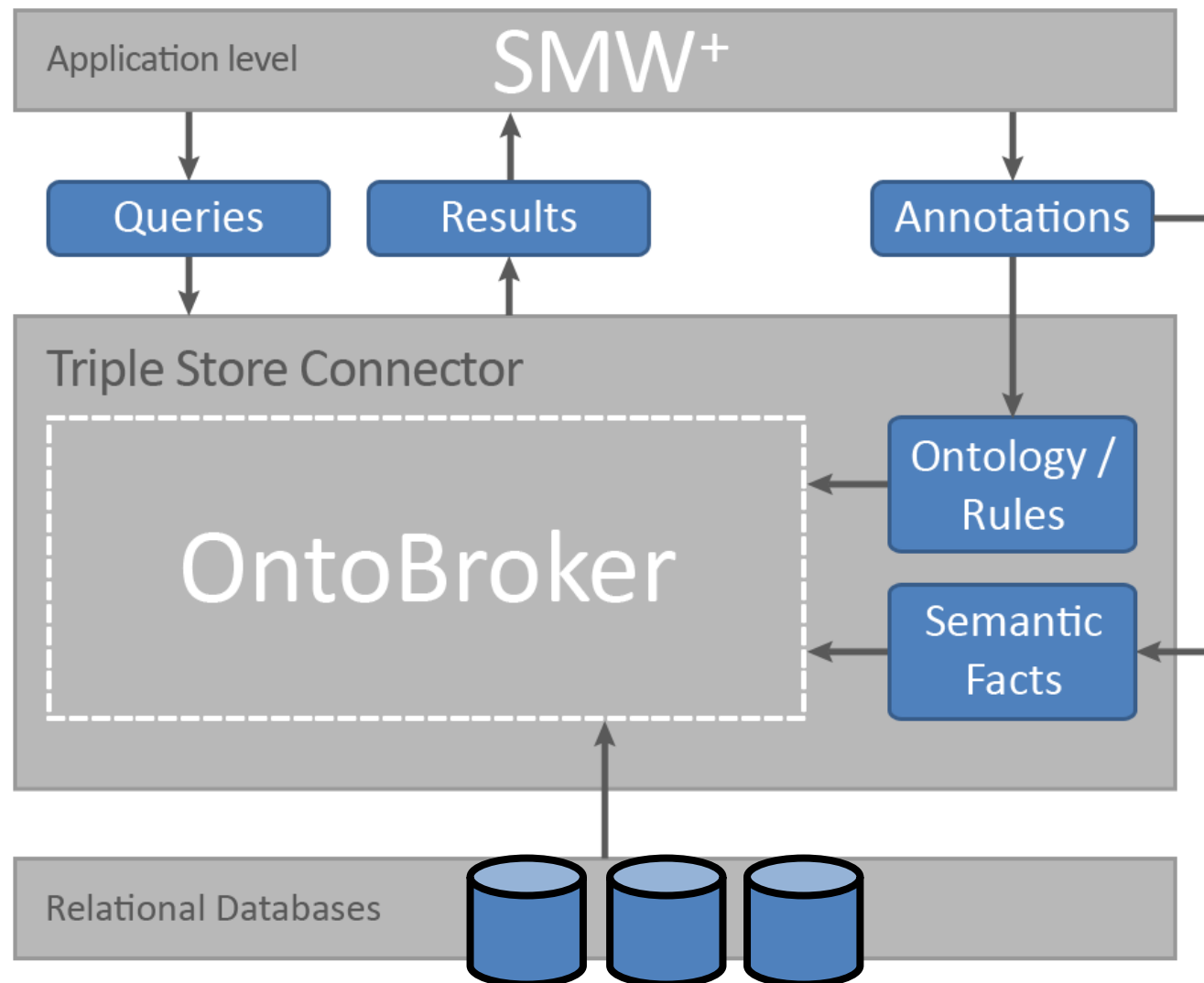
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SMWCon Fall 2011, Berlin

- Enterprises typically manage their **data in relational databases**
- Often a landscape of isolated **data silos** grows
- **Wiki provides one platform for sharing information**
- Nevertheless,
 - the data bases exist
 - contain valuable information
 - will not be deserted
- The enterprise use cases we see, often require access to external data from within the wiki
 - Usually the external data sources are relational databases
 - Wiki is used as a data access and visualization tool
 - Wiki users should be able to formulate queries







Workflow for Data Integration with SMW+

■ OntoStudio

- Lift database schema
- Model wiki ontology
- Map database ontology to wiki ontology
- Test and refine mappings
- Export ontologies
- Transfer to Wiki server

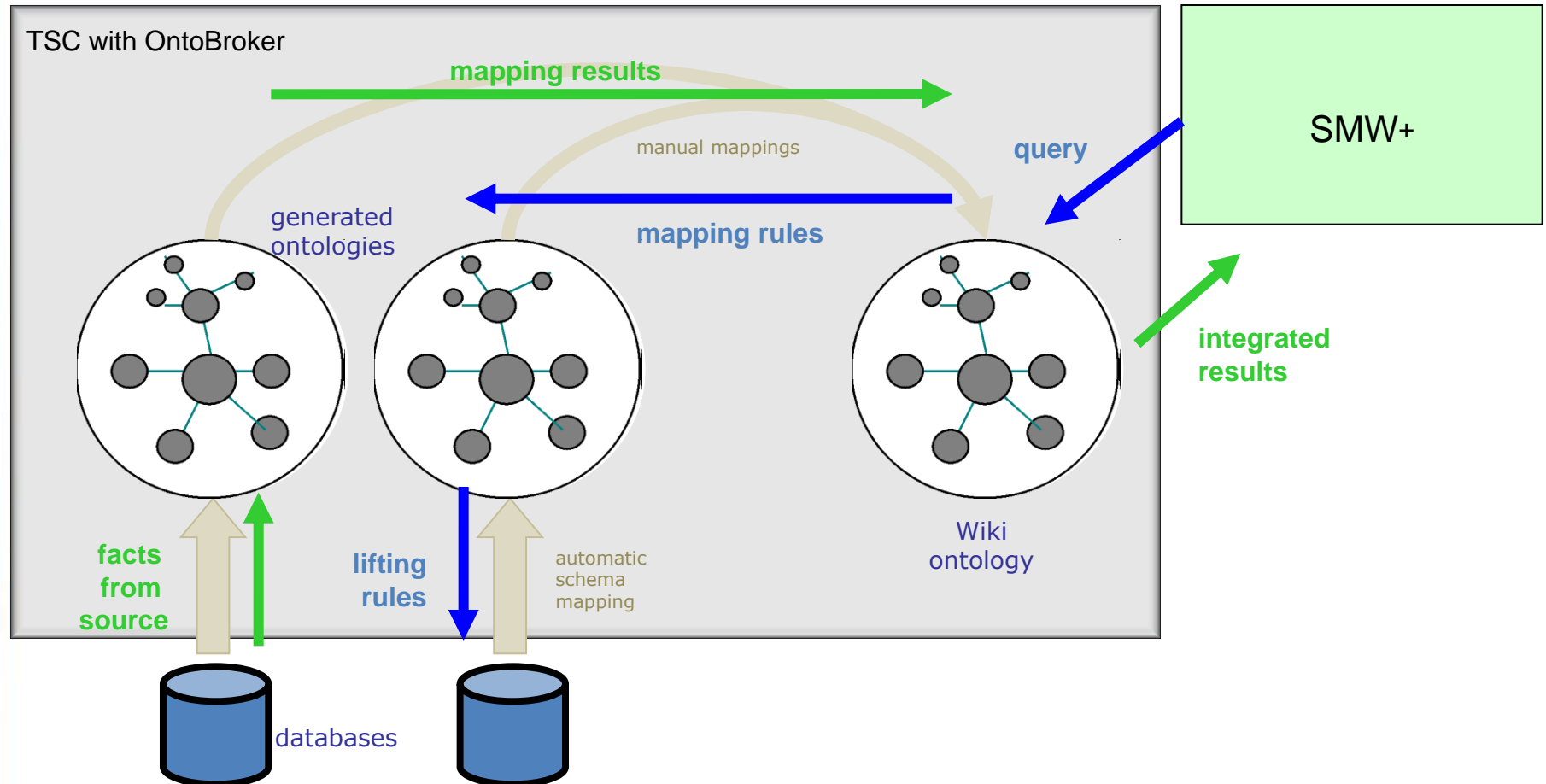
■ SMW+ / TSC

- Import ontologies
- Formulate queries (QI)
- Create articles containing inline queries
- Browse database via Non-Existing-Pages
- Potentially, enhance model via annotations
- Adapt and extend wiki ontology
- Export ontology as OBL

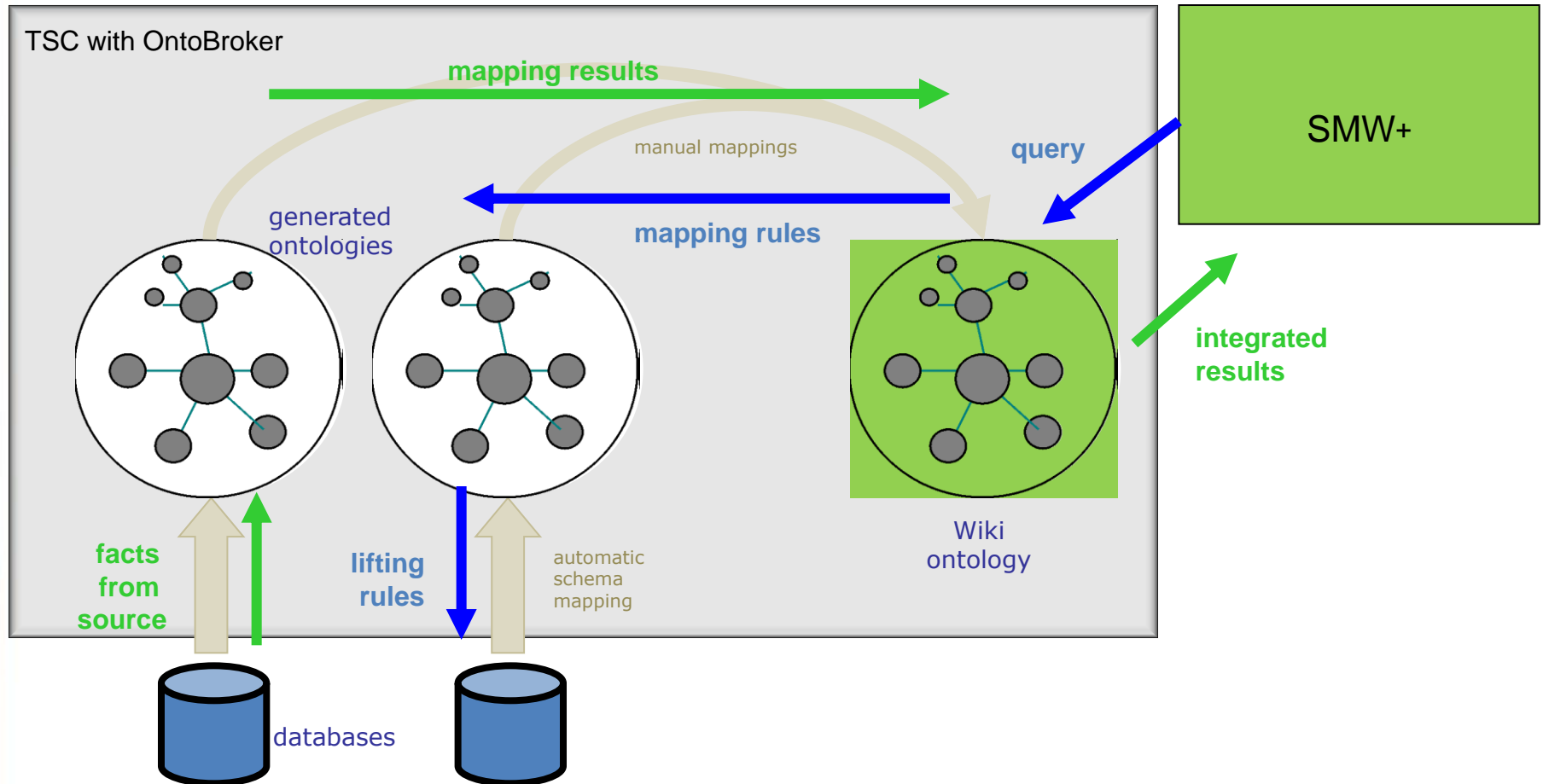
- Import ontology
- Test and refine ontology

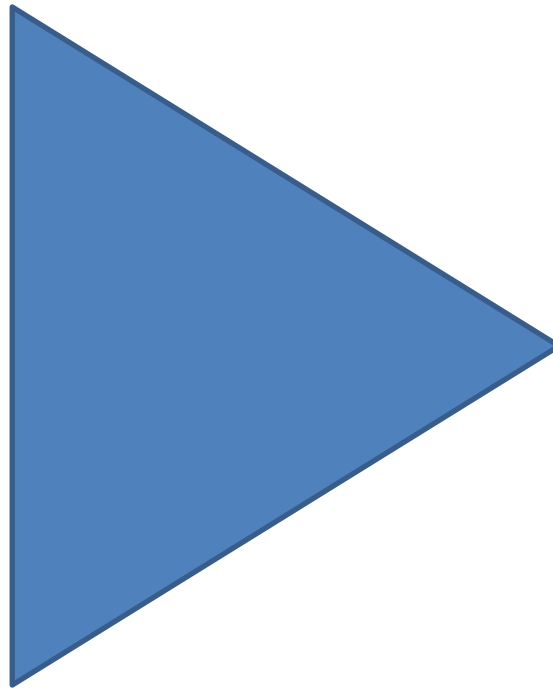


Query Answering



Queries and Results use the Wiki Vocabulary





Screen Capture Lifting and Mapping

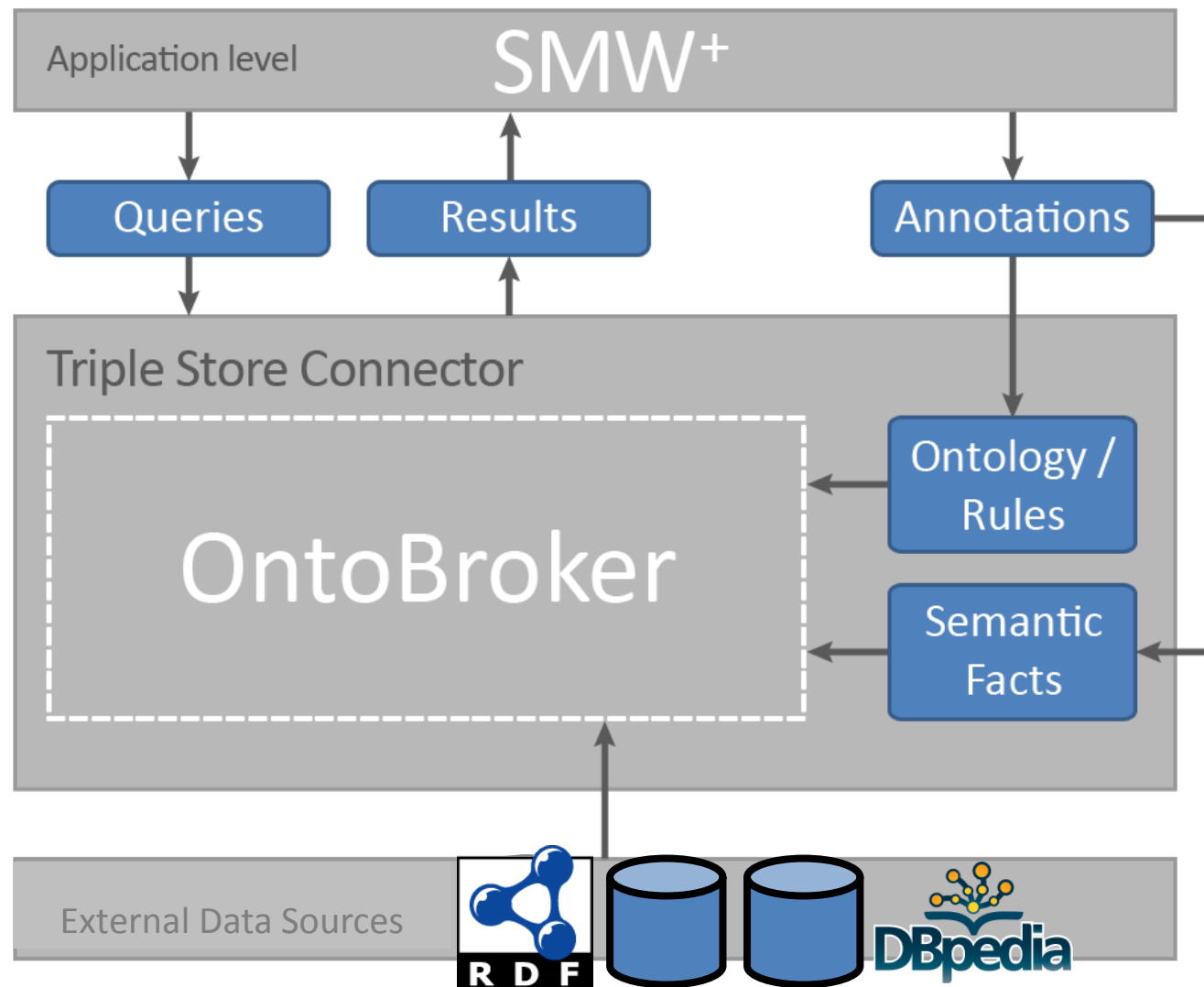


- SMW⁺ and TripleStoreConnector realize
 - Access to relational data from within SMW
 - **Using the wiki vocabulary**
 - Live queries
 - Enhance/Extend the data by wiki users in the wiki
- Currently working on
 - Supporting the same feature for **SPARQL endpoints**



- Approach
 - Endpoint is queried for its schema information
 - Schema is extracted
 - Lifting rules are generated
 - This results in an ObjectLogic ontology
 - This ontology can be integrated and mapped into the **wiki ontology**
 - It can even be mixed with other data sources, e.g. DBs.
- In the wiki
 - **Wiki ontology** can be used to query and visualize remote data from the endpoint
 - Query Interface supports query building out of the box





- Thank you!



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